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10/762,515	01/23/2004	Jacob Mozel	4707-001	5240

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LOWE HAUPTMAN BERNER, LLP  
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ALEXANDRIA, VA 22314

EXAMINER
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FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
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1712

MAIL DATE	DELIVERY MODE
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06/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/762,515

Applicant(s)

MOZEL ET AL.

Examiner

Michael J. Feely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 53-67 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 53-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Pending Claims***

Claims 53-67 are pending.

### ***Response to Amendment***

1. The rejection of claims 37-51 under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling has been rendered moot by the cancellation of these claims.
2. The rejection of claims 43, 45, and 46 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement has been rendered moot by the cancellation of these claims.
3. The rejection of claims 37-51 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been rendered moot by the cancellation of these claims.
4. The provisional rejection of claims 37-52 on the ground of nonstatutory obviousness-type double patenting has been rendered moot by the cancellation of these claims.
5. The indicated allowability of claim 52 has been rendered moot by the cancellation of this claim.

### ***Claim Interpretation***

6. In claims 53-67, the recitation "*ink-jet*," has been given little patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the

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body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In the instant case, the preamble merely recites the intended use of the liquid thermosetting ink, wherein the prior art can meet this future limitation by merely being capable of such intended use.

### ***Specification***

7. The specification remains objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: instant claim 1 and originally filed claim 3 include *inorganic boron salts* in the list of curing agents. The Specification does not include these materials – *see page 4, lines 19-21*.

### ***Claim Rejections - 35 USC § 112 1<sup>st</sup> paragraph***

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 53-67 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. A liquid thermosetting resin is critical or essential to the practice of the

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invention, but not included in the claim(s). The omission of this essential feature is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The preamble of the claim calls for a “micron liquid thermosetting ink-jet ink;” however, the body of the claim does not include a liquid thermosetting component.

10. Claims 53-67 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling. The following property set:

- A viscosity lower than 50 cPs at application temperature;
- A surface tension lower than 80 dyne/cm at application temperature; and
- A glass transition temperature of said ink, in a cured form, greater than 120°C.

are critical or essential to the practice of the invention, but not included in the claim(s). Such an omission is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The background portion of the Specification (*see page 1*) and the summary invention (*see page 4*) disclose that these properties are essential to use the instantly claimed ink in inkjet printers.

11. Claims 53-67 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 53, not all of the structural relationships describing the curing agent particles are supported by the specification. The embodiment “*dispersed upon said inert*

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*particle*” is open to systems wherein components (a) and (b) are mixed together without actually forming a coating (*layer*) on or impregnating the particle. The curing agent of the instant invention must either feature a coating (*layer*) or an impregnating relationship of components (a) and (b) – *see pages 5-6*. Claims 54-67 are rejected because they are dependent from claims 53.

Regarding claim 58, not all of the epoxy resins set forth in claim 58 are supported by the Specification – *see: page 4, lines 22-25; page 9, lines 1-5*.

Regarding claim 59, not all of the monomers and/or oligomers set forth in claim 59 are supported by the Specification – *see: page 5, lines 5-10; page 9, lines 21-26*.

Regarding claim 65, not all of the impact modifiers and/or flexibilizers set forth in claim 65 are supported by the Specification – *see: page 4, line 28 through page 5, line 2; page 9, lines 11-16*.

***Claim Rejections - 35 USC § 112 2<sup>nd</sup> paragraph***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 53-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 53-67 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are:

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(1) The preamble of the claim calls for a “micron liquid thermosetting ink-jet ink;” however, the body of the claim does not include a liquid thermosetting component.

(2) The following property set:

- A viscosity lower than 50 cPs at application temperature;
- A surface tension lower than 80 dyne/cm at application temperature; and
- A glass transition temperature of said ink, in a cured form, greater than 120°C.

The background portion of the Specification (*see page 1*) and the summary invention (*see page 4*) disclose that these properties are essential to use the instantly claimed ink in inkjet printers.

The body of claim 57 is convoluted. It should be rewritten as: “adapted to cure epoxy compounds having at least two epoxy groups, said epoxy compounds selected from the group consisting of aromatic epoxy compounds, heterocyclic epoxy compounds, and cycloaliphatic ring epoxy compounds.

Claim 65 recites the limitation “the impact modifiers and/or flexibilizers” in the ink according to claim 53. There is insufficient antecedent basis for this limitation in the claim. These materials are introduced in claim 64.

### ***Double Patenting***

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

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*Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 53-67 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the combined teachings claims 1, 2, and 17-25 of copending Application No. 10/762,508 (US 2005/0161633). Although the conflicting claims are not identical, they are not patentably distinct from each other because the combined teachings of claims 1, 2, and 17-25 significantly overlap and anticipate the scope of the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Rejections - 35 USC § 102***

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.



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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

17. Claims 53-55, 59, and 64-67 rejected under 35 U.S.C. 102(a/e) as being anticipated by Sano et al. (US 2003/0236321).

Regarding claims 53-55, 59, and 64-67, Sano et al. disclose: (53) a micron liquid thermosetting ink-jet ink (Abstract) comprising: solid composite curing agent particles with a maximal size of less than 2 micron (paragraph 0042) each comprising (a) an inert particle (paragraph 0042); and (b) a curing agent layered on the surface of said inert particle (paragraph 0042);

(54) wherein said curing agent is latent (paragraphs 0058-0063); (55) wherein said curing agent is selected from the group consisting of *see claim for list* (paragraphs 0058-0063);

(59) additionally comprising monomer and/or oligomers selected from *see claim for list* (paragraphs 0043-0057);

(64) additionally comprising impact modifiers and/or flexibilizers having rubbery moieties or blocs in their chain (paragraphs 0043-0057); (65) wherein said impact modifiers and/or flexibilizers are selected from *see claim for list* (paragraphs 0043-0057);

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(66) additionally comprising mineral fillers, having a maximal particle size of about 2 microns in the final ink; wherein the concentration ranges between about 1 to 30% by weight (paragraphs 0042 and 0064-0065); and

(67) additionally comprising additives selected from *see claim for list* (paragraphs 0064-0065).

***Claim Rejections - 35 USC § 102/103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 57, 58, and 60-63 are rejected under 35 U.S.C. 102(a/e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sano et al. (US 2003/0236321).

Regarding claims 57, 58, and 60-63, these claims present limitations wherein the composition is *adapted to* particular applications and materials. These limitations are merely future intended use limitations. A recitation of intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

In the instant case, the prior art composition appears to be inherently capable of performing these intended uses because the prior art composition satisfies all of the material/chemical limitations of the instant invention.

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***Response to Arguments***

20. Applicant's arguments with respect to claims 53-67 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

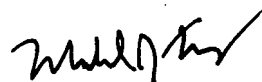
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*Communication*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely  
Primary Examiner  
Art Unit 1712

June 8, 2007

**MICHAEL FEELY**  
**PRIMARY EXAMINER**